

FOURTH BI-MONTHLY PROGRESS REPORT  
UNIVERSITY OF ALASKA  
ERTS PROJECT 110-14  
March 31, 1973

- A. TITLE OF INVESTIGATION: Feasibility Study for Locating Archaeological Village Sites by Satellite Remote Sensing Techniques
- B. PRINCIPAL INVESTIGATOR/GSFC ID: Dr. John P. Cook/UN 597
- C. PROBLEMS IMPEDING INVESTIGATION: None at this time
- D. PROGRESS REPORT:

1. Accomplishments during reporting period: As detailed in our semi-annual report, a digital signature print-out has been accomplished for the Kaltag-Nulato test area. Part of our work during this reporting period has involved checking signed pixels against ground-truth and aerial photography provided by NASA as part of an attempt to provide a second generation of improved signatures. Using aerial photography provided, we have made a large mosaic photograph of the Kaltag-Nulato test area. This mosaic will be of aid in identifying possible Archaeological Village Sites (see plans for next reporting period).
- Work to date has concentrated on the Kaltag-Nulato test area where ground truth operations were carried out. As part of preparation to produce a signature print-out of the other test area, Pt. Hope, Alaska, we have examined the NASA-provided aerial photography of that area. We found that the false-color infrared photography was particularly suited to revealing former habitation sites. A vast number of such sites (actually fallen-in subterranean houses) have been found on the Pt. Hope spit at a location that has not been indicated on previous maps.
- Only the southern part of the spit was entirely cloud-free but it is just this area which was not previously well-mapped. Included in this report are the following maps: Figure 1, a portion of the USGS map showing the Pt. Hope area, Figure 2 the map of Pt. Hope spit produced by Larsen and Rainey (1948), Figure 3, a map of the Pt. Hope spit produced as a result of analysis of the NASA-provided aerial photography. Previously three main former habitation areas have been identified on the spit: Jabbertown, Ipiutah and Old Tigara. We feel that the identification of this additional former habitation area is a significant result.
- This aerial photography may be of immediate benefit to a project currently underway at Pt. Hope. Because of continued erosion of the spit, it has been determined to move the village of Pt. Hope from its present site adjacent to Old Tigara to a new location just south of the Jabbertown site. In addition to providing site planning information, the identification of archaeological sites for salvage archaeology is extremely important. Pt. Hope has been identified as a site of continuous occupation for many centuries. It is extremely important that no archaeological data

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(E73-10406) FEASIBILITY STUDY FOR  
LOCATING ARCHAEOLOGICAL VILLAGE SITES BY  
SATELLITE REMOTE SENSING TECHNIQUES  
Bimonthly Progress Report (Alaska Univ.)  
Fairbanks.) 8 p HC \$3.00

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be lost due to any cause which can be avoided.

2. Plans for next reporting period: A map indicating possible archaeological village sites in the Kaltag-Nulato test area will be prepared.

E. SIGNIFICANT RESULTS: See separate page

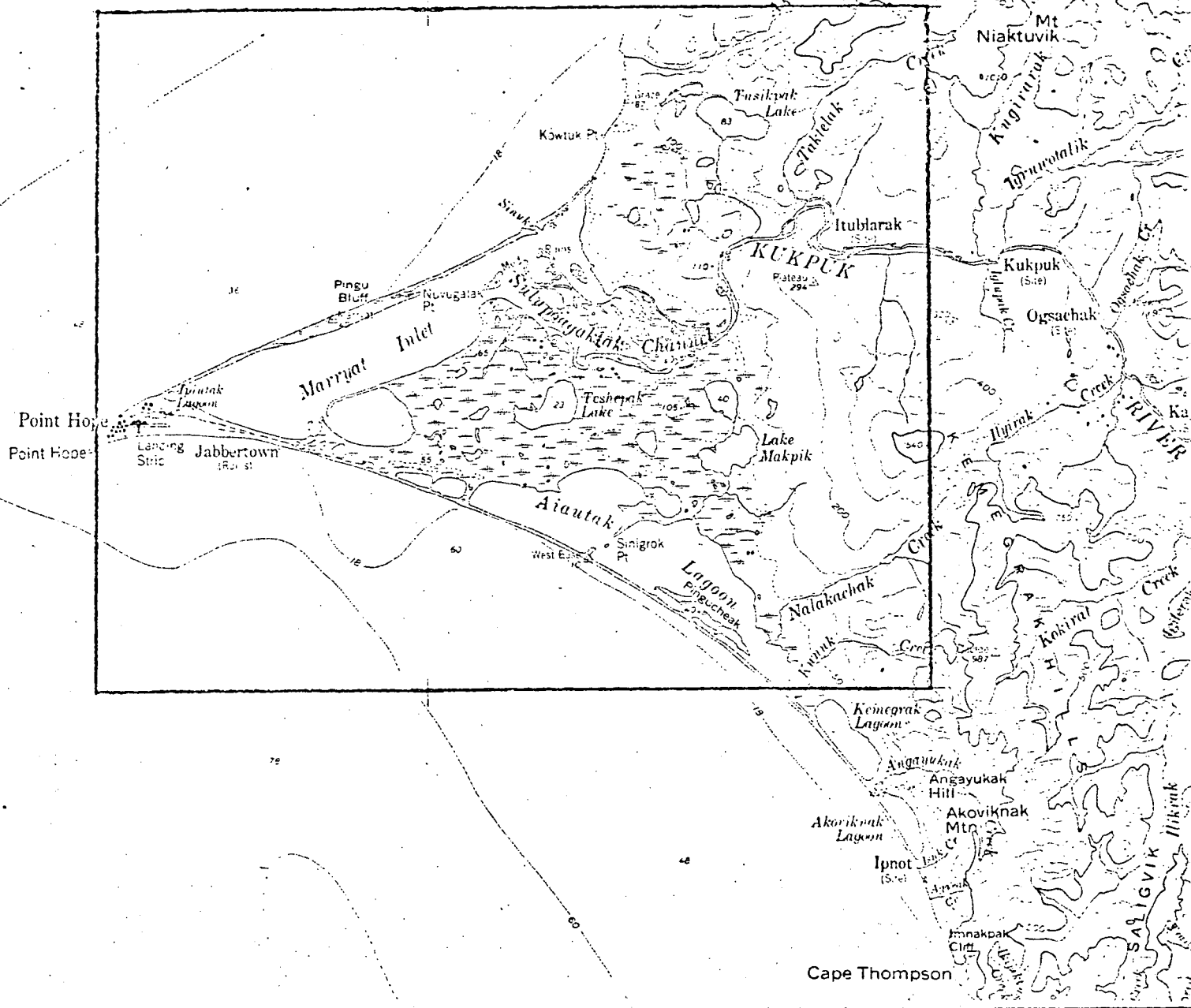
F. PUBLICATIONS: None

G. RECOMMENDATIONS: None

H. CHANGES IN STANDING ORDER FORMS: None

I. ERTS IMAGE DESCRIPTION FORMS: None

J. DATA REQUEST FORMS: None



SCALE 1:250 000

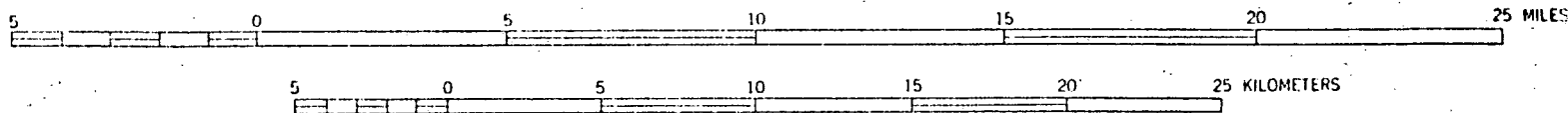


Figure 1. Map of Pt. Hope test area

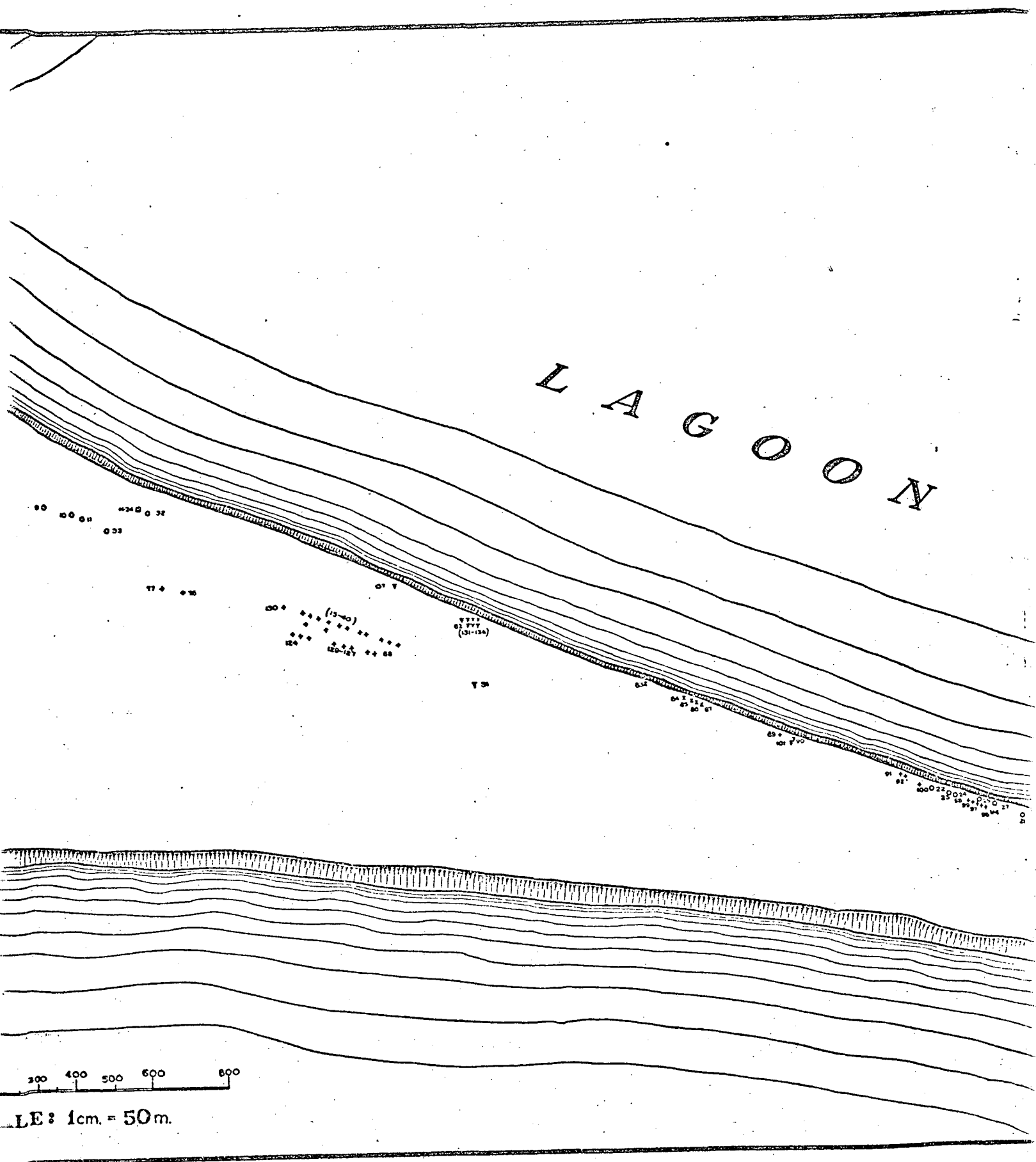


Figure 2. Continued.

FOLDOUT FRAME

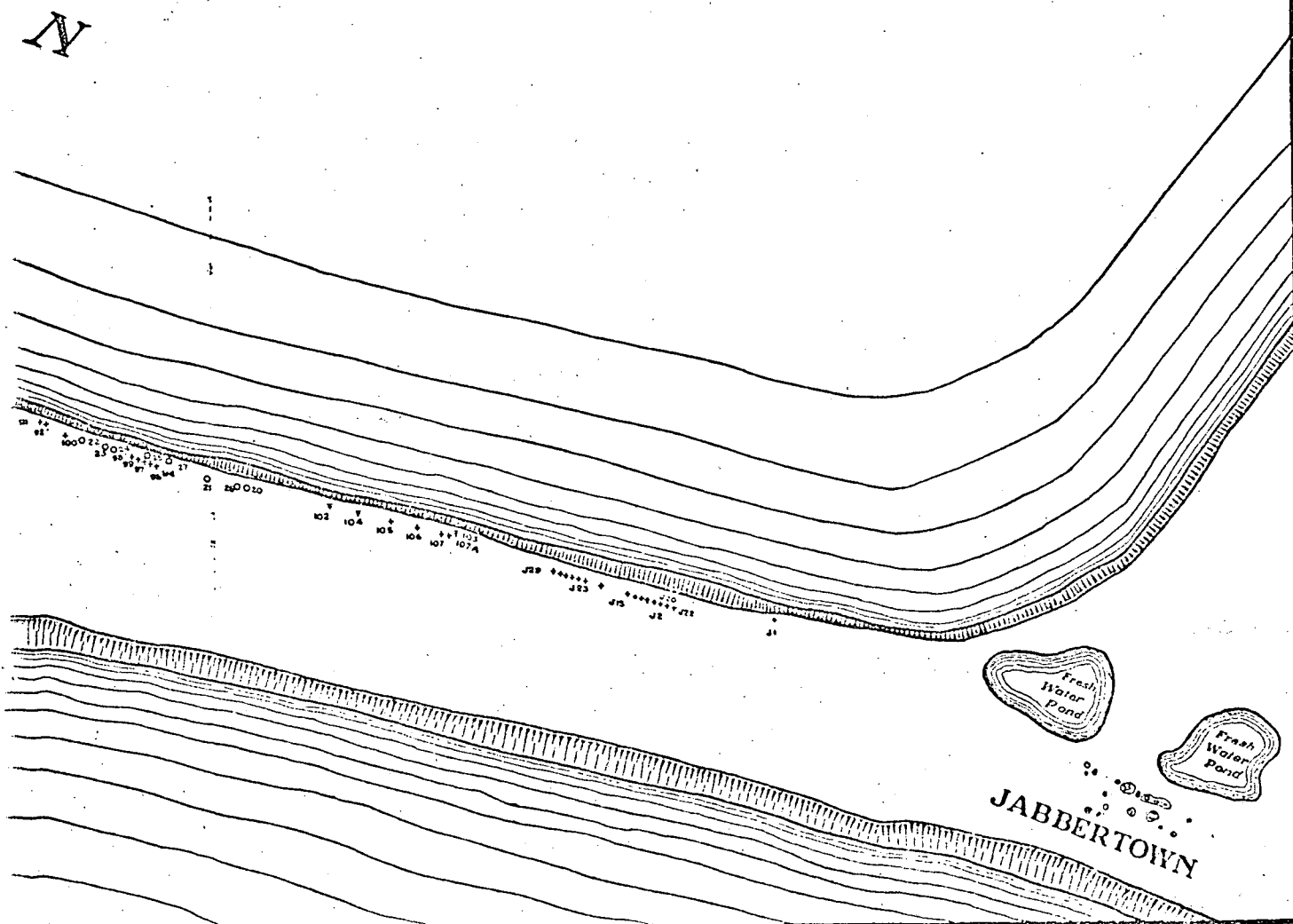
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# POINT HOPE ALASKA

166°-42' LONGITUDE 68°-19' LATITUDE

## LEGEND

- .....EXCAVATED HOUSE RUINS
- △.....MODERN OCCUPIED HOUSES
- T.....TIGARA GRAVES
- +.....IPIUTAK GRAVES
- O.....MIDDENS
- X.....NEAR IPIUTAK GRAVES
- †.....GRAVES OF UNCERTAIN TYPE



EOLDOUT FRAME 3

Figure 2. Map of Pt. Hope area by Larsen and Rainey (1948) showing ruins and graves.

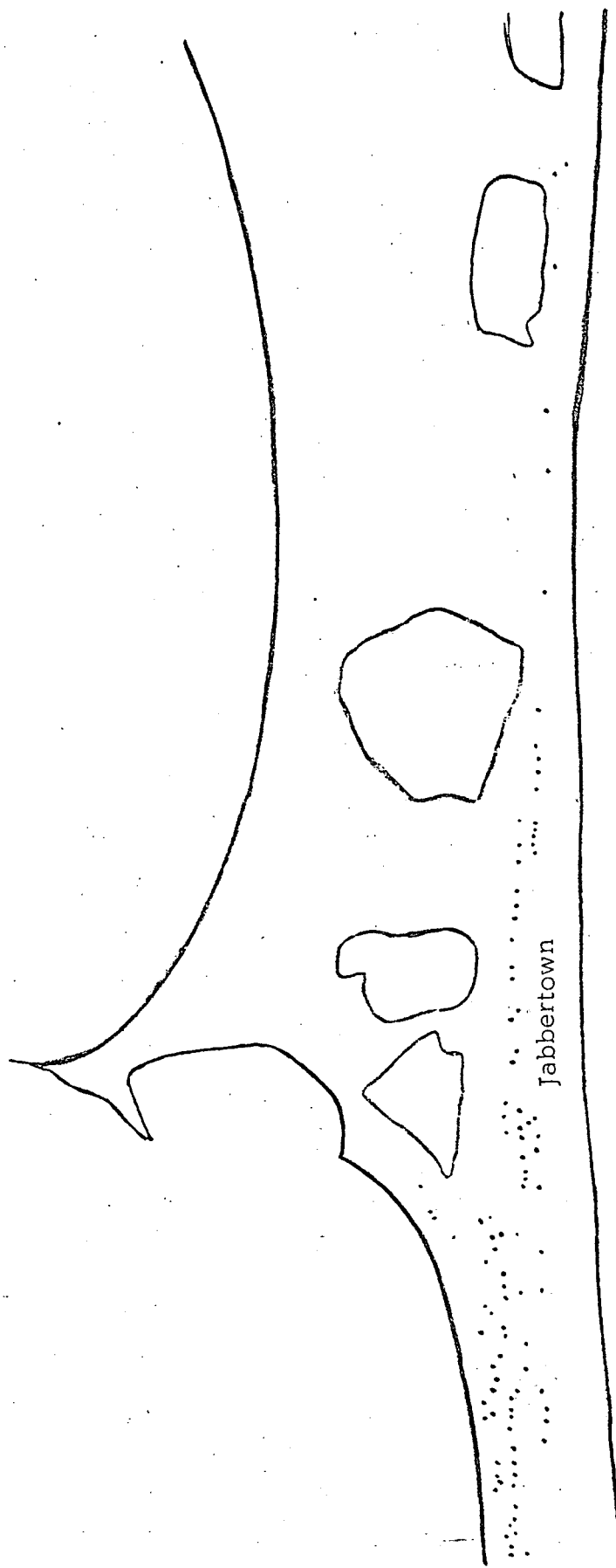


Figure 3. Map showing locations of suspected house pits on Pt. Hope spit found by examination of NASA-provided false-color infrared photography.

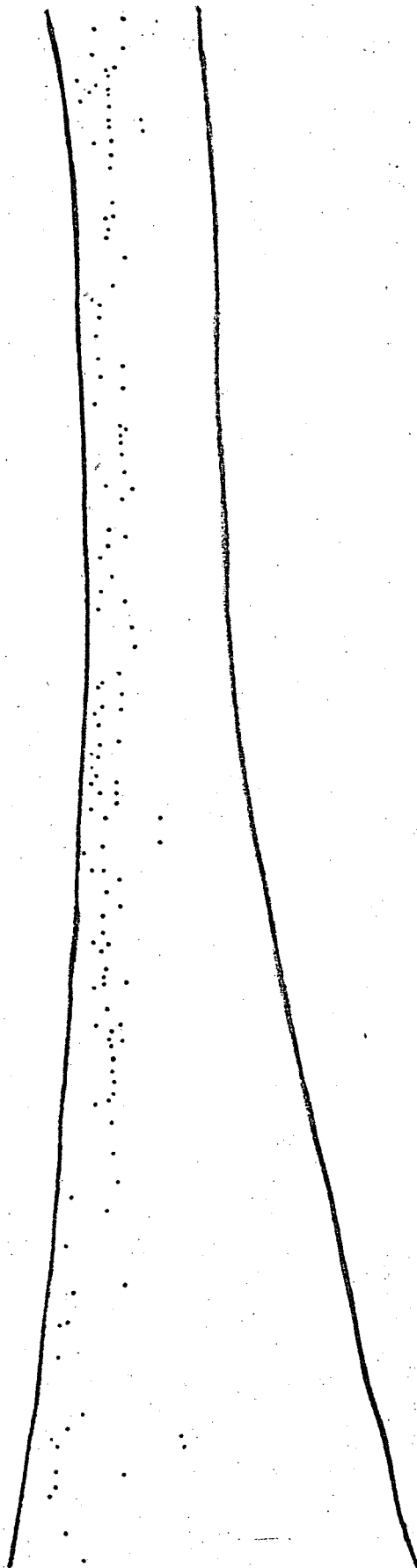


Figure 3. Continued.

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TITLE OF INVESTIGATION: Feasibility Study for Locating Archaeological  
Village Sites by Satellite Remote Sensing  
Techniques

DISCIPLINE: Archaeology

SUBDISCIPLINES: Demography, Interpretation Techniques Development

SUMMARY OF SIGNIFICANT RESULTS: Examination of NASA-provided aerial photography at the Pt. Hope, Alaska area has revealed numerous "house pits" or the remains of former subterranean houses which have caved in. Although three major groupings of former house sites have previously been identified, a fourth area, north of the group known as "Jabbertown" had not previously been identified. It appears that this fourth site is quite extensive and may be of significance to understanding the sequence of habitation of the Pt. Hope location.

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